The sucrose (present in Grace’s medium) to glucose conversion was linearly dependent of the hemolymph concentration. Sucrase (sucrose hydrolase) activity was higher in culture medium supplemented with salt solution (Na\(^+\), Ca\(^{2+}\), Mg\(^{2+}\)) being this effect more intensive with Na\(^+\) salt. This could be due to the cations be necessary for the enzyme activity. The glucose production was linearly dependent of the hemolymph concentration, reaching a value of 10 mmol L\(^{-1}\) day\(^{-1}\) at 10% of hemolymph concentration. One third protein present on hemolymph showed a beneficial effect in insect cell cultivation since that the viability was maintained for longer periods of time after hemolymph supplementation maybe due to a potential anti-apoptotic effect. Some small peptides (10-15 a.a.) were seem also to have a potent antimicrobial effect against micrococcus luteus.

**Conclusion:**
The date obtained in this study showed that cell culture supplementation with hemolymph can be an important tool to obtain high cell culture densities. The supplementation of the culture medium by hemolymph enhanced insect cell culture growth twice and longevity of viability for more than 4 days. The proteins of interest were effectively resolved by gel filtration and ion-exchange chromatography. The sucrase activity was clearly identified and isolated and a potent antimicrobial agent was identified and isolated.

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